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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Thomas N. Jackson
Serial No.:	09/882,815
Filed:	June 15, 2001
For:	MOLECULAR PROBE STATION
Examiner:	Trung Q. Nguyen
Art Unit:	2829
Docket No.:	823.0098USU

BOX AF
COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Dear Sir:

REQUEST FOR RECONSIDERATION TRANSMITTAL FORM

We are enclosing a Request for Reconsideration in the above-identified application.

Petition for extension of time pursuant to 37 C.F.R. §§ 1.136 and 1.137 is hereby made if, and to the extent, required. The fee for this extension of time is calculated to be $_____ to extend the time for filing this response until _____.

The fee for any change in number of claims has been calculated as shown below.

CLAIMS AS AMENDED						
	Claims Remaining After Amendment		Highest Number Previously Paid	Present Extra	Rate	
Total Claims	15	Minus	15	0	x $18.00	$0.00
Independent Claims	2	Minus	2	2	x $84.00	$0.00
MULTIPLE DEPENDENT CLAIM FEE						x $280.00 = $
TOTAL FEE FOR CLAIM CHANGES						$0.00
½ FEE FOR SMALL ENTITY STATUS						$0.00

The total fee for this amendment, including claim changes and any extension of time is calculated to be $ 0.00 .

____ A Request for Extension of Time is attached.

____ A check in the amount of $ 0.00 is attached.

X The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §§1.16 and 1.17 which may be required with this communication or during the entire pendency of the application, or credit any overpayment, to **Deposit Account No. 01-0467.** A duplicate copy of this Form is enclosed.

April 11, 2003
Date

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CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE U.S. POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: BOX AF, COMMISSIONER FOR PATENTS, WASHINGTON, D.C. 20231, ON APRIL 11, 2003.

Jeffrey J. Scepanski
NAME

SIGNATURE

04/11/03
DATE

#9 Req for Reconsideration 4/24/03 amr

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	JACKSON, THOMAS N.
Serial No.	:	09/882,815
Filed	:	JUNE 15, 2001
Title	:	MOLECULAR PROBE STATION
Examiner	:	TRUNG Q. NGUYEN
Art Unit	:	2829
Atty. Docket No.	:	823.0098USU

Box AF
Commissioner for Patents
Washington, D.C. 20231

REQUEST FOR RECONSIDERATION

Dear Sir:

In response to the Office Action dated February 12, 2003, please consider the following remarks in the above-noted application.

REMARKS

Claims 1-15 are pending in the present patent application.

The Office maintains the rejection of claims 1-15 under 35 USC 102(b) as being anticipated by Lindsay et al., U.S. patent no. 5,495,109 (hereinafter Lindsay). This rejection is traversed.

Applicant's arguments of record are incorporated herein and are applicable since the Office maintains the same rejections based on the same cited and relied upon references.

Regarding the Office's "new explanations" of the rejections as stated in the Remarks section of the Office Action, Applicant respectfully submits that the "new explanations" fail to support the rejection of any of claims 1-15.

The Office sites and relies upon the disclosure of Lindsay at col. 7, ln. 40-52, for allegedly disclosing that the contact area of the Lindsay probe tip is extremely large. Lindsay discloses,

> consider a probe tip contacting an area of 10nm diameter and being swept across the surface at 20,000 nm/s (a typical speed). The tip sweeps out an area of 2E5 nm^2 ($2x10^5$ nm^2) each second. (emphasis added)

Clearly, the disclosed probe tip has a contact area of 10 nm diameter. It is also clear that the tip is moved across the surface at a rate (i.e., speed) of 20,000 nm/s. The product of the contact area and the speed (i.e., contact area (nm) x speed (nm/s)) yields an indication of the area swept out by the moving probe tip in a given unit of time (i.e., nm/s^2). It is clearly understood that the area swept out depends on ***both*** the size of the contact area and the speed of tip movement. It follows that simply because the area swept out is large does not mean or indicate that the contact area of the probe is large, as concluded by the Office. Refer to the Office Action where, based on the Lindsay disclosure as cited above, it is stated, "It is clearly understood that the contact area is extremely large".

The reason the area swept out by the 10 nm diameter contact area probe tip is large is because the ***speed*** at which the tip is moved is $2x10^5$ nm/s. The contact area of the probe tip is not large. The contact area of the probe tip is 10 nm diameter, not a large contact area as claimed by Applicant.

Therefore, the Office's citation to and reliance on Lindsay as discussed above is fatally flawed and does not support a rejection of the claims under 35 USC 102(e).

Again, as stated in previous arguments submitted to the Office, Lindsay does not disclose a large contact area probe tip. The disclosed 10 nm diameter contact area of the Lindsay probe tip is not the same as Applicant's clamed method and system AFM having a cantilever including a large contact area probe tip (see claims 1 and 8). In fact, Applicant contrasts and distinguishes the claimed large contact area probe tip from probe tips having a contact are of 10 nm in the specification at page 7, ln. 5-25.

Applicant discusses probe tips having a contact area of 10 nm and the problems associated therewith to distinguish such probe tips from the claimed large contact area probe tip.

Therefore, a probe tip having a 10 nm diameter contact area is not the same as the claimed large contact area probe tip.

It is reiterated that, as stated in the specification, "[A]n important aspect of the present invention is that the AFM cantilever has a relatively large contact area or radius tip, as compared to the surface defects of the molecular surface being measured. The large contact area of the probe tip is in contrast to the small radius probe tips used in conventional AFM. The large contact area of the probe tip distributes the applied force to a greater surface area of the molecular surface being tested. Thus, penetration, and disruption, of the molecular layer being measured is minimized, thereby enabling an accurate measurement of the intrinsic electrical characteristics thereof." (See the specification, page 4, line 17-24). That is, Applicant recognized a problem in measuring electrical characteristics on the molecular level using conventional AFM probe tips and claims a method and system having a large contact area probe tip to overcome such problems.

Therefore, the size of the contact area of the claimed probe tip is not a mere design choice devoid of significance. There is in fact critically associated with Applicant's claimed method and system having a large contact area probe tip, for at least the reasons discussed above.

Thus, it is clear that Lindsay does not disclose, at least, Applicant's claimed cantilever including a large contact area probe tip. Accordingly, reconsideration and withdrawal of the 35 USC 102(b) rejection are requested, as well as the allowance of claims 1 and 8.

Regarding the 35 USC 102(b) rejection of claims 2 and 9, it is respectfully submitted that Lindsay does not disclose a large radius sphere as defined by Applicant's claims and specification. The 10 nm diameter tip as disclosed in Lindsay and relied upon by the Office is a conventionally sized probe. As discussed above,

Lindsay uses a conventional (i.e., known, small contact area/radius probe) tip whereas Applicant claims a large contact area probe tip. Examples of the substantial differences between the Lindsay probe tip and Applicant's large contact area probe tip are supported by Applicant's specification at least at page 8, line 22-23 wherein it is stated that "[S]pheres suitable for use include both glass and polymer spheres with radii from a few tens of nanometers to a few tens of microns or even larger." Clearly, a "large" probe tip as consistently used and claimed by Applicant is not disclosed by Lindsay.

Accordingly, it is respectfully submitted that for at least the reasons stated above, the cited and relied upon Lindsay reference fails to anticipate claims 2 and 9. Reconsideration and withdrawal of the rejection are requested, and the allowance of claim s 2 and 9.

Claims 3-7 and 10-15 depend from claims 1 and 8, respectively. For at least the reasons stated above regarding the rejection of claims 1 and 8, it is respectfully submitted that claims 3-7 and 10-15 are not anticipated by Lindsay. Accordingly, it is respectfully submitted that the cited and relied upon Lindsay reference fails to anticipate claims 3-7 and 10-15. Reconsideration and withdrawal of the rejection are requested, as is the allowance of claims 3-7 and 10-15.

Thus, it is respectfully submitted that all of claims 1-15 are in a condition for allowance, and allowance of claims 1-15 is earnestly solicited.

Respectfully submitted,

Date: April 11, 2003

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